

**ARADUS PERICARTI, A NEW SPECIES FROM
SOUTH AMERICA (HETEROPTERA, ARADIDAE)**

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Abstract.—A new species of neotropical *Aradus* is described from Surinam. Habitus, male genitalic and other structures are illustrated. A key is given for the six South American species of *Aradus* with bicolored antennae and their antennae are figured.

The genus *Aradus* shows a preponderantly Holarctic distribution and is represented in the Nearctic Region by 78 species, but only 10 are known to date from the Neotropical Region (Kormilev and Froeschner, 1987:11). Most of them belong to the "*falleni*" species group which is characterized by a caudoventral opening of the male genital segment VIII and bicolored antennae. All of them seem to be rare in collections although they are good flyers and mostly collected at light. Their biology and ecology are still unknown.

Specimens from Surinam proved to belong to a new taxon which is described below. To ascertain the identity of neotropical species described by Stal in the last century it was necessary to revise his type material. A paper with the results of the type-investigation is in press.

***Aradus pericarti*, new species**
(Figs. 1-3, 9-19)

Diagnosis. Distinguished from all neotropical members of the *falleni* species group by its shape and coloration of the antennae and the male genitalic structures shown in Figures 9-19.

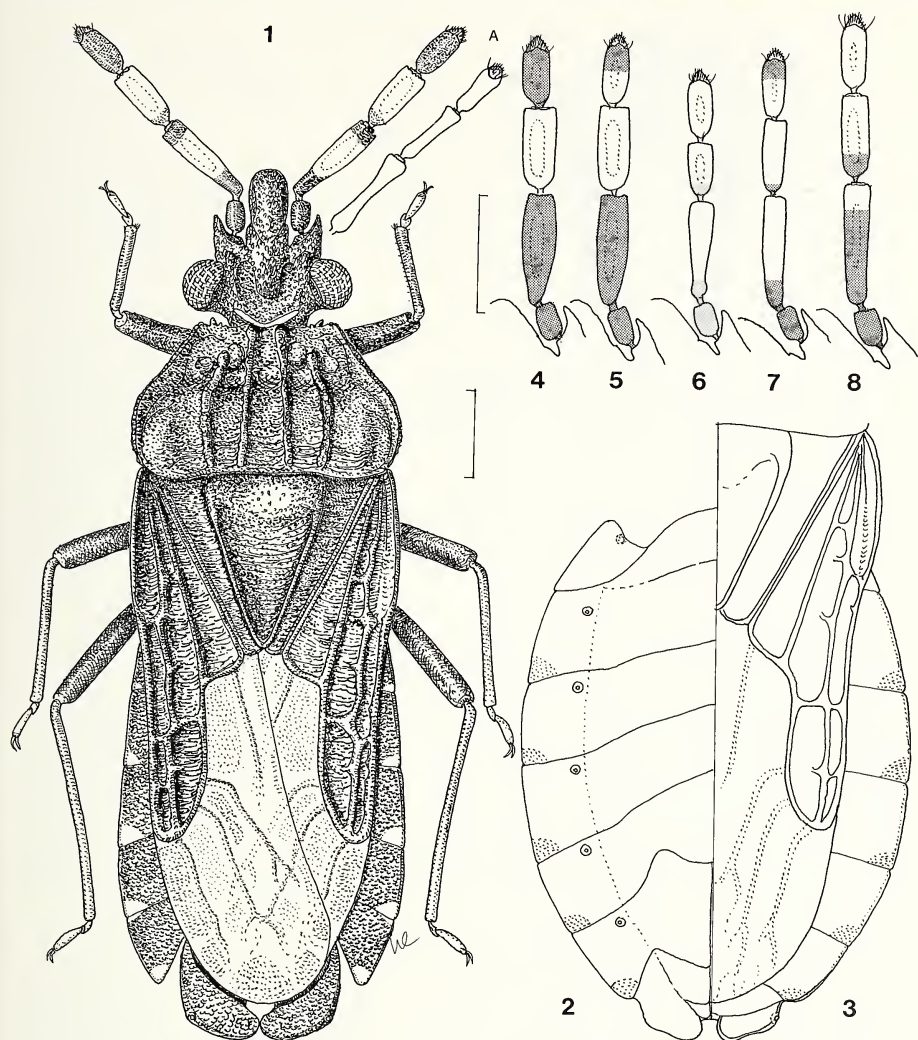
Description. Male. Macropterous; body elongate, its surface and appendages covered with fine granulation which partially bears short bristles.

Head. Shorter than width across eyes (33/37); clypeus constricted at middle, apex rounded. Antenniferous tubercles reaching $\frac{1}{2}$ of antennal segment I, apices acute. Eyes large, globose. Preocular tubercles distinct, blunt. Postocular portion of head rounded, strongly converging posteriorly, without postocular tubercles. Vertex granulate medially with 2 (1 + 1) smooth, oval depressions laterad, posteriorly delimited by a thin v-shaped whitish transverse callosity.

Antennae. $1.59 \times$ as long as width of head across eyes; segment I subcylindrical, segments II to IV depressed; II constricted at base, apically enlarged and with parallel sides as segments III and IV. Rostrum arising from an open atrium, reaching $\frac{3}{4}$ of prosternum.

Pronotum. $1.75 \times$ wider than long (58/33); lateral margins straight and converging anteriorly, anterolateral lobes angulately rounded, anterior margin dentate laterally. Disk with 4 longitudinal carinae and carinate humeri.

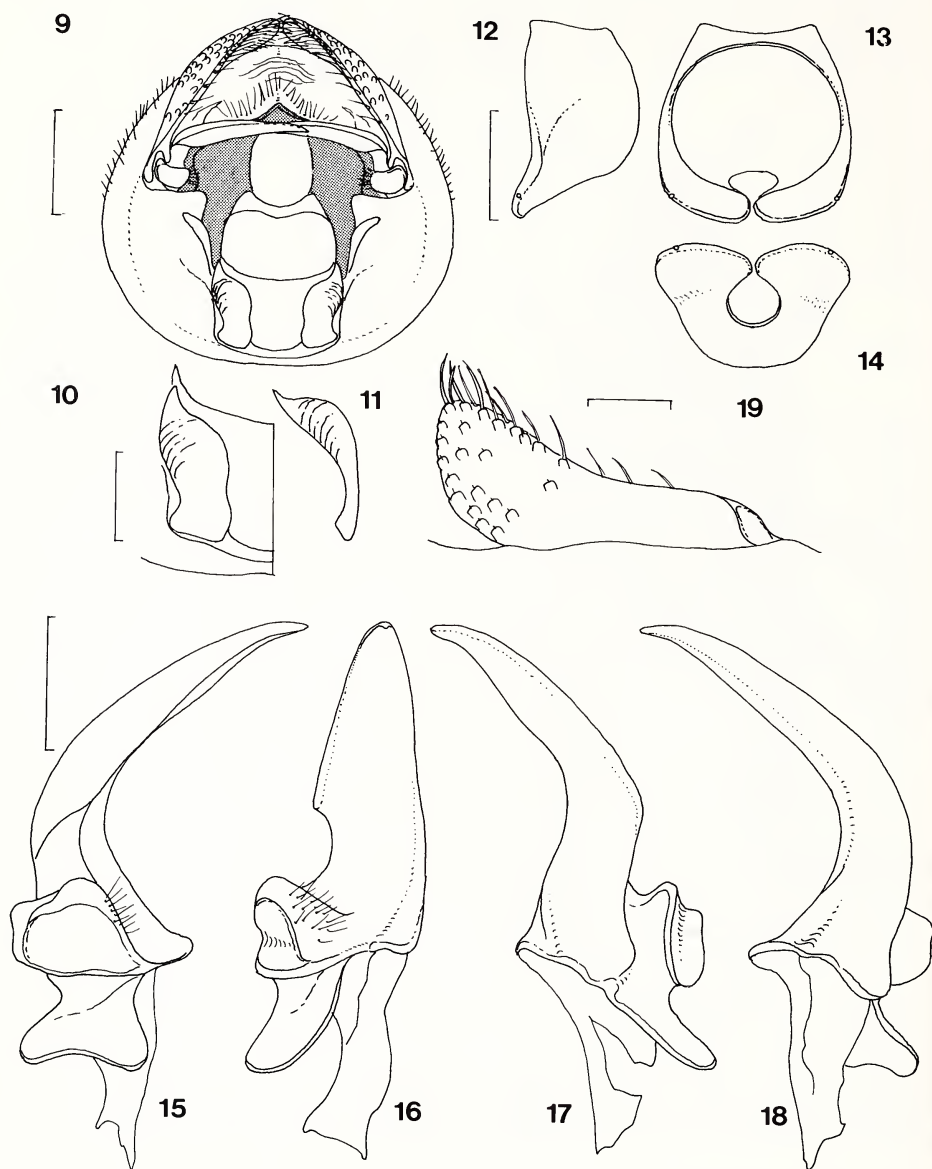
Scutellum. Triangular with elevated lateral margins, disk raised at basal $\frac{1}{3}$.



Figs. 1-8. 1-3. *Aradus pericarti*, new species. 1. Habitus of male holotype. 1a. Lateral view of right antenna. 2. Female, venter. 3. Female, abdomen dorsal. 4-8. Antennae of neotropical *Aradus*. 4. *penningtoni*. 5. *brasiliensis*. 6. *falleni*. 7. *fronterana*. 8. *mexicanus*. Scale 0.5 mm.

Abdomen. Lateral margins straight, slightly converging anteriorly. Hemelytra complete, corium reaching anterior border of dorsal laterotergite (dltg) VI; membrane hyaline with distinct veins. Spiracles II to VII ventral, VIII dorso-lateral and visible from above.

Genitalic structures. Genital segment VIII cup-like with expanded and raised posterior lobes and a caudoventral oval opening (Figs. 12-14). Pygophore globose, flattened dorsally (Fig. 9). Parandria as Figure 19; parameres as Figures 15-18; tergite



Figs. 9-19. *Aradus pericarti*, new species. 9. Pygophore dorsal. 10. Left lobe of tergite IX dorsal. 11. Dto. lateral. 12. Male genital segment VIII lateral. 13. Dto. dorsal. 14. Dto. caudal. 15-18. Left paramere in different positions. 19. Parandrium lateral. Scale 0.2 mm for Figure 9, 0.5 mm for Figures 12-14, 0.1 mm for Figures 10, 11, 15-19.

IX formed by 2 (1 + 1) lobes with acute apices which are curved downwards (Figs. 10, 11).

Legs. Slender. Trochanters of fore- and middle legs fused, those of hind legs marked by a distinct suture.

Female. Similar to male but larger and abdomen more rounded laterally. Paratergites VIII as Figures 2, 3.

Coloration. Generally dark brown to black, but legs are usually of lighter color. Whitish-yellow are the median portion of antennal segment II, segment III except the base and the posterior-exterior angles of dltg III to VII on dorsal and ventral side.

Etymology. Dedicated to my friend and eminent French heteropterist Mr. Jean Péricart, in occasion of his 65th birthday.

Holotype. Male, Surinam, Marowijne Prov., Oelemari River, Oct. 88 lg. Vincenti, in coll. EH.

Paratypes. 2 ♂♂, 3 ♀♀ collected with holotype in coll. EH, a paratype will be deposited in USNM, Washington.

Measurements. Holotype ♂: Length 4.8 mm; width of abdomen across corium 1.52 mm. Paratypes ♀♀: Length 5.15, 5.25, 5.55 mm; respective width across corium 1.72, 1.73, 1.85 mm, across tergite IV 2.2, 2.2, 2.37 mm. Relative length of antennal segments basically as in males.

DISCUSSION

The South American *Aradus* fauna comprises 5 species with bicolored antennae, but *mexicanus*, Usinger 1936, which is also found in Brazil, lacks the caudoventral opening of the male genital segment VIII. *A. fronterana* Drake, 1942, was also described from Mexico but occurs possibly in Northern South America and is therefore included in the key. It might have been confused with the widespread *falleni* Stal, 1860. These 6 species can be separated by the following key:

KEY TO SOUTH AMERICAN *ARADUS* WITH BICOLORED ANTENNAE

- 1 (2) Antennal segment II with apical $\frac{1}{2}$ whitish, basal $\frac{1}{4}$ of III dark, IV whitish (Fig. 8), male segment VIII without a caudoventral opening *mexicanus* Usinger
- 2 (1) Whole antennal segment II dark (Figs. 4, 5) or predominantly yellowish (Figs. 1, 6, 7), caudoventral opening present 3
- 3 (6) Antennal segment II entirely dark 4
- 4 (5) Only antennal segment III yellowish (Fig. 4) *penningtoni* Drake
- 5 (4) Antennal segment III and basal half of IV yellowish (Fig. 5) *brasiliensis* Usinger
- 6 (3) Antennal segment II predominantly yellowish (Figs. 1, 6, 7)
- 7 (8) Antennal segment II depressed, its basal and apical $\frac{1}{4}$ dark, III yellowish with dark base, IV dark (Fig. 1) *pericarti* n. sp.
- 8 (7) Antennal segment II not depressed, coloration of antennae different 9
- 9 (10) Antennae yellowish to brown, usually segment I, basal $\frac{1}{4}$ of II and III darker, segment II constricted at base (Fig. 6) *falleni* Stal
- 10 (9) Antennae yellowish with segment I, basal $\frac{1}{4}$ of II, base of III and apical $\frac{1}{3}$ of IV dark, segment II longer and evenly tapering towards base (Fig. 7) ... *fronterana* Drake

